

licenses can only mean that prices are being raised above average cost, and that capacity constraints (which would imply rapidly rising incremental costs as the airspace becomes fully congested) do not provide the explanation.

Reed's analysis for FCC policymakers included an appraisal of how the amount of spectrum awarded to each cellular or PCS licensee would affect the level of costs; both how it would affect minimum efficient cost (the cost achieved when the cost curve flattened out), and how it would impact the volume needed to achieve minimum efficient cost.

Reed found that relatively modest spectrum allocations (10 MHz - 30 MHz) would allow new entrants to achieve minimum efficient scale for carrying the volumes of traffic which were likely to be involved. He also found that there were economies of scale and scope between cellular and PCS; that allowing an existing cellular provider to also have some PCS spectrum space would enable an efficient digitization of existing (analog) cellular service. Pointedly, his policy recommendation was to thereby allow each of the two incumbent cellular firms to acquire (or utilize) up to 10 MHz of spectrum space, but no more. New entrants, meanwhile, were permitted access to blocks of up to 40 MHz. The limitation on spectrum to cellular incumbents was clearly dependent on Reed's assessment of efficiency: existing firms should be able to expand output to offer new services, but that the market power of existing licensees should not be allowed to thwart increased competition. His argument for limiting spectrum assignments of more than 10 MHz to cellular operators was thus:

*Several reasons exist for precluding cellular operators from acquiring additional spectrum in the 2 GHz band. First, model results indicate 25 MHz of spectrum is sufficient to deliver PCS using microcells and cellular services using macrocells at competitive unit costs. In particular, the marginal benefits of additional spectrum appear to be relatively small for the base case assumptions. Second, cellular operators already have a significant first mover advantage on PCS markets. Allowing them to gain the benefits from additional spectrum would make it more difficult for new entrants to establish*

*themselves in the marketplace. Third, allowing cellular operators to obtain 2 GHz spectrum would reduce the number of competitors in the PCS market.*<sup>79</sup>

If cellular incumbents do not exercise some significant degree of market, Reed's prescription to limit spectrum for incumbent firms is inexplicable. Why favor entrants over incumbents when distributing the new spectrum rights? Moreover, Reed's study shows that the additional benefits derived from giving existing firms any more than a modest amount of new spectrum are small; if spectrum scarcity (and not duopolistic output restriction) were the constraining force, then new spectrum allocated to incumbents would have a large impact in providing new services to the public -- as large as that realized by distributing the spectrum to new entrants. Reed rejects this view, and advocates a policy which specifically reflects that judgment. As seen below, the Commission's PCS policymaking has, as well.

### 5.3 The Kwerel-Williams Study.

The question of market power in cellular duopolies was addressed by Evan Kwerel and John Williams in 1992. In their cost/benefit analysis of a voluntary reallocation of the frequency space effectively covered by one UHF-TV licensee in Los Angeles into cellular telephone service, they had to estimate the impact of new entry into cellular markets by a third firm vs. added spectrum space for the two existing firms (using a fixed amount of new cellular spectrum in either case). This led them to implicitly consider the output-restricting capacity of existing cellular providers by explicitly considering the likely output-expanding impact of a policy which favored new entry. Their analysis is revealing:

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<sup>79</sup> David Reed, "Putting It All Together: The Cost Structure of Personal Communications Services," FCC Office of Plans and Policy, Working Paper No. 28 (November 1992), p. 57.

*Of course, we would expect the price reduction to be much greater if the spectrum were used to create a competing third system rather than dividing it up between the existing operators. Based on a simple theoretical model of oligopoly pricing and some empirical evidence from other industries, we would expect cellular prices to fall approximately 25% as the result of introducing a third competitor.<sup>80</sup>*

The FCC's own studies assume that market power is likely to restrict output and drive price higher than marginal cost. Hence, the marginal cost of spectrum within an FCC license allocation cannot account for the high prices being charged in cellular duopoly markets.

#### **5.4 The Federal Communications Commission PCS Rulemaking.**

The recent FCC rulemaking on PCS embodies the logic displayed in the staff studies discussed above. While up to seven new wireless telephone licenses covering 120 MHz of spectrum space are to be assigned in each market, the only economic entities constrained to 10 MHz are the existing cellular telephone incumbents. The logic of duopoly market power can be the only reasonable premise for this exclusion, particularly as the cellular companies can exploit some economies of scope in acquiring access to new spectrum.<sup>81</sup> One may agree or disagree with this regulatory restriction, or find that the safeguards will be insufficient to

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<sup>80</sup> Kwerel & Williams 1992, p. 4. "In our model, entry need only result in about a 3.5% price reduction for the benefits of a reallocation [to a new competitor] to exceed the costs. This price reduction is approximately 2.5 percentage points greater than the minimum required for a reallocation to existing cellular operators to be socially beneficial (case 2) -- a small difference relative to the likely price reductions from introducing a third competitor" (Kwerel & Williams 1992, p. 79).

<sup>81</sup> This is detailed in the Reed 1992 study, and noted in the FCC's PCS rulemaking (Federal Communications Commission, "Amendment of the Commission's Rules to Establish New Personal Communications Services," Second Report and Order, Gen. Docket No. 90-314 (Released 22 October, 1993) [hereinafter "PCS Rulemaking"], par. 104.

enforce the 10 MHz limit<sup>82</sup>; the bottom line remains that the only logical interpretation for the incumbent cellular PCS license cap is derivative from the conclusion that market power drives cellular firms to restrict output, and that ensuring that new entrants emerge will yield a greater social value.<sup>83</sup>

*[W]e are concerned with the potential for unfair competition if cellular operators are allowed to operate PCS systems in areas where they provide cellular service. We believe that constraints should be imposed on cellular ownership of PCS systems within their cellular service areas.<sup>84</sup>*

The FCC's announced policy is to limit cellular company access to new PCS licenses only where they currently operate existing cellular systems, on the grounds that competition would not be well served. The logic is clear: market power is currently being exercised by cellular incumbents in their service areas, and allowing PCS licenses to be absorbed by such firms would likely promote less competition (and less price reduction to consumers) than would new entry. Conversely, where cellular operators do not exercise such market power -- out of their licensed service areas -- there is less of a competitive issue. That the FCC took the step of limiting cellular access to but 10 MHz of PCS spectrum, where other firms were allowed as much as 40 MHz, in light of its own acknowledgement of significant economies

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82 The FCC's PCS rulemaking specifically recognizes that its rules may be circumvented by warning that the Commission will revisit the issue: "Parties are on notice that we intend to reconsider this limit if we conclude that our intent to insure competition between cellular and PCS could be undermined under the ownership rules we adopt today" (PCS Rulemaking, Par. 110).

83 If market power is exercised by cellular duopolists, and new licenses are auctioned by the government (as they will be this May) or in secondary markets, the highest bidders will tend to be the incumbents who derive higher value from the licenses than would entrants who expect to operate in more competitive markets. The fact that FCC allocation policies continue to restrict competition to those holding licenses allows monopolization to occur much more easily here than in free entry markets.

84 PCS Rulemaking, paragraphs 104-5.

of scope between PCS and cellular supply and in light of additional PCS entrants, underscores the importance which the Commission itself placed upon the output-restricting potential of cellular operators.

### 5.5 The 1992 CBO Study Finds Cellular Duopolists Restrict Output.

The 1992 CBO Report on spectrum license auctions consistently refers to the market power exercised by existing cellular duopolists. They find that new rights to provide wireless telecommunications services will be worth considerably less than existing rights because the greater abundance of competitors will drive down industry rents. Their findings include the following:

*In each local market, service providers have only limited incentives to engage in price competition. Above-average profits can be defended by keeping prices well above costs.<sup>85</sup>*

*This simple comparison of monthly average revenues with monthly average costs is consistent with the expectation of economists that, in markets with only two producers, prices will remain well above costs. Producers make limited use of pricing as a competitive weapon.<sup>86</sup>*

And in estimating what 50 MHz of new wireless spectrum licenses would fetch at auction, the CBO is careful to explicitly note the importance of market power. It also employs the \$80 billion license-value figure from NTIA which Haring & Jackson object to in my paper, and reasons that license values will drop significantly if the market power of existing cellular duopolists is dissipated via new entry:

*NTIA's analysis of transactions in broadcasting provides an illustrative counterpoint to the value of \$80 billion for the 50 MHz of spectrum allocated for licenses to provide cellular telephone services. Based on 1990 transactions, the value of the over 400 MHz of spectrum allocated to all commercial broadcasting licenses -- AM*

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85 CBO Report, p. 26.

86 *Ibid.*, p. 27.

radio, FM radio, and VHF and UHF televisions -- was estimated to be \$11.5 billion. This estimate suggests an approximate value of \$1.3 billion for 50 MHz of frequency. Unlike cellular telephone services, broadcasting is already a mature, highly competitive industry. In this environment, the spectrum allocated for commercial broadcasting is stripped of most of the excess profits that underly the value of the spectrum allocated for cellular telephone services. Although the 50 MHz of spectrum additionally allocated in the base case to land-mobile services will not create a competitive market overnight, the decision by the FCC to make such an allocation would signal the beginning of a policy aimed at creating more competition. Bids for new licenses are more likely to reflect the anticipation of this development than the recent history of high returns guarded by duopoly.<sup>87</sup>

## 5.6 Cellcos Themselves Attribute License Values to Duopoly Market

### Power.

Entirely silent is the Haring & Jackson paper on one of the most obvious pieces of evidence of market power in cellular: The cellular telephone operators argue for it themselves.

It is worth repeating the following claim made by an expert witness for Los Angeles Cellular Telephone Company, in a 1990 property tax proceeding involving the State of California:

*It can be demonstrated that companies in a competitive industry have no particular or material license value. If the market for cellular telephone services was perfectly competitive, it would be open to all sellers willing to make the required investment... Under competitive circumstances, therefore, any license value would be essentially zero.*

*The market in which the cellular telephone industry operates today is a special form of monopoly or oligopoly called a duopoly. This situation is the result of the FCC limiting to two the number of cellular*

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87 CBO 1992, p. 37.

*telephone companies (sellers) in each SMSA... From the licensee's point of view, a license is valuable because it gives the holder some control over its market.<sup>88</sup>*

## 6 Conclusion.

The critique launched by Haring & Jackson on "Market Power in the Cellular Telephone Duopoly" is entirely without merit. Their theoretical discussion mistakenly sees a Bertrand (perfectly competitive) solution where a Cournot (duopolistic output restriction) solution is described. As to the facts, it is simply undeniable that the firms in the cellular industry make above-competitive profits, and that the primary source of such profits are the barriers to entry erected by past FCC allocation decisions. While the size of such rents can be debated by reasonable people, every available government data source -- and even those taken selectively from industry sources by Haring & Jackson -- indicate the presence of huge rents being earned in cellular. Using the very same analytical techniques once championed by Charles Jackson now defines a market in which prices are significantly above the opportunity costs of suppliers.

Haring & Jackson heroically attempt to explain away these rents as simply the resource cost of spectrum. This is analytically incorrect. FCC licensees own no spectrum and, more importantly, bid no spectrum away from an alternative use. To argue such, as do Haring & Jackson, is to misunderstand the FCC allocation process, on the one hand, and to *erase all* evidence of market power *anywhere* by simply redefining monopoly profits as "opportunity costs." In the

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<sup>88</sup> "Declaration of Arthur A. Schoenwald in Opposition to Defendant's Motion for Summary Judgment and Summary Adjudication of Issues," in *Los Angeles Cellular Telephone Company vs. State Board of Equalization, et al.*, No. 509737 Superior Court, Sacramento, California (30 April, 1990), pp. 24, 25, 27.

traditional microeconomic analysis, license values for cellular duopolists measure rents, not costs, and present policymakers with handy estimates of the degree of supra-competitive returns now being earned in cellular markets.

Haring & Jackson analogize to the real estate market, alleging that my Q ratio analysis of market power in cellular would produce "evidence" of market power in any competitively priced real estate development because it omits the resource cost of land (*i.e.*, spectrum). Their analogy is fatally flawed. The correct analogy would be to examine a development which has been set aside as one of only two parcels of land in the country where a certain sort of commerce may be transacted. The land is "cleared" for this particular employment by the government, which then assigns the rights to use such favorably zoned land (at zero charge) in two lotteries.<sup>89</sup> The rights are transferable. They are sold for prices reflecting not the opportunity cost of land, but the present value of anticipated profits accruing from exploiting a market protected from competition. If this duopoly right extends over a lucrative market, licenses will sell at a high price; if the licensed service is in very low demand relative to costs of supply, a small -- or zero -- price. The resource cost of land is simply irrelevant. The license-holder, after all, does not have to bid this land away from any alternative use; the land is appropriated into this use by government policy. To confuse the license value with the opportunity cost of land is to commit the famous "sunk cost fallacy" -- in broad daylight.

If I had calculated a Q ratio while leaving out the cost of an input which the firm must bid away from competing uses, I would have a problem. I did not. On the other hand, if we were to attribute all supracompetitive profits to the value of the land, then *any* monopolistic returns would escape our notice. In that the zoning permit which limits competition is worth a fortune,

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<sup>89</sup> The advent of auctions will not change the economic analysis. See argument *supra*, Section 3.2.



and is instantly capitalized into the price of the land to which such rights are attached, the duopoly land-owners could simply insist that they had no market power -- they had simply paid a bundle for their land, and hence their costs were very high. Alas, purchasing monopoly -- or duopoly -- rights is often an expensive proposition. Supra-competitive returns are the reason why.

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BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

RECEIVED

OCT 19 1994

FCC MAIL ROOM

In the Matter of )  
 )  
Petition of the People of the )  
State of California and the )  
Public Utilities Commission )  
of the State of California )  
to Retain Regulatory Authority )  
over Intrastate Cellular Service )  
Rates )  
\_\_\_\_\_ )

PR Docket No. 94-105

APPENDICES TO

REPLY BY CALIFORNIA TO OPPOSITIONS TO CPUC PETITION  
TO RETAIN REGULATORY AUTHORITY OVER  
INTRASTATE CELLULAR SERVICE RATES

October 18, 1994

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**Appendix A:**  
**Revenue Per Minutes Of Use Study**

## Appendix A

### Revenue per MOU Carriers in Top Four Markets

Year	Nominal		Real	
	Average	Wtd. Avg.	Average	Wtd. Avg.
1993	\$0.599	\$0.625	\$0.517	\$0.539
1992	\$0.586	\$0.603	\$0.517	\$0.532
1991	\$0.587	\$0.598	\$0.536	\$0.546
1990	\$0.554	\$0.565	\$0.520	\$0.531
1989	\$0.516	\$0.571	\$0.516	\$0.571
1989 - 1993	\$0.084	\$0.055	\$0.001	(\$0.032)
% Change	16.2%	9.6%	0.2%	-5.6%
1991 - 1993	\$0.012	\$0.027	(\$0.019)	(\$0.007)
% Change	2.1%	4.5%	-3.6%	-1.3%

California's Top Four Markets are: Los Angeles, San Francisco-Oakland-San Jose, San Diego and Sacramento.

MOU data unavailable for BACTC in 1989 and 1990,  
revenue for U.S. West in 1989.

Source: Carrier response to CPUC Data Request,  
Annual Reports.

Weighted Average is total revenue / total MOUs in four markets

CPI used is California specific CPI.

## Appendix A

### Average MOU per Subscriber Unit per Month

Carriers in Top Four Markets

Year	Average	Wtd. Avg.
1993	126	136
1992	143	158
1991	158	175
1990	187	208
1989	201	224
1989 - 1993	-75	-88
% Change	-37.3%	-39.3%
1991 - 1993	-32	-39
% Change	-20.2%	-22.3%

California's Top Four Markets are: Los Angeles, San Francisco-Oakland-San Jose, San Diego and Sacramento

MOU data unavailable for BACTC in 1989 and 1990

Source: Carrier response to CPUC Data Request

Weighted Average is carrier MOU per subscriber per month \*  
percentage of total MOU for that carrier for that year.

CPI is California specific CPI

**Appendix B:**

**Excerpts from  
Comment Of The Staff Of The Bureau Of Economics Of The Federal Trade  
Commission Before The FCC**

COMMISSION AUTHORIZED

BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D. C. 20554

In The Matter of	)	
	)	
Bundling of Cellular Customer	)	CC Docket No. 91-34
Premises Equipment and	)	
Cellular Service	)	

Comment of the Staff of  
the Bureau of Economics  
of the Federal Trade Commission

July 31, 1991

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\* This comment represents the views of the staff of the Bureau of Economics of the Federal Trade Commission. They are not necessarily the views of the Commission or any individual Commissioner. Inquiries regarding this comment should be directed to Bruce H. Kobayashi (202-326-3363) of the FTC's Bureau of Economics.



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electronics industry has been observed.<sup>22</sup>

However, there is not general agreement with the NPRM's tentative conclusion that cellular service is "sufficiently competitive" and is produced in an industry with a "competitive structure."<sup>23</sup> The NPRM states that "within each market, facilities-based carriers compete not only with each other, both directly and through agents, but also with numerous resellers."<sup>24</sup> The NPRM also notes that cellular companies "must also compete with other types of communications services, such as paging and wireline service."<sup>25</sup>

#### 1. The Structure of the Cellular Service Industry

The U. S. Department of Justice Merger Guidelines set out a method used by the antitrust agencies to determine whether a product or group of products constitute an antitrust market.<sup>26</sup> An antitrust market consists of the product or group of products for which a hypothetical monopolist would find profitable a small but significant and non-transitory increase in the price over competitive levels, assuming initially that entry into the

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<sup>22</sup> For example, Kenwood, a producer of home and car audio equipment recently entered the CPE market, and other electronics manufacturers such as Sony have announced their intention to enter the market. See Comments of the CTIA, supra note 15.

<sup>23</sup> See NPRM, supra note 1, §III.13 and n. 15.

<sup>24</sup> See NPRM, supra note 1, §III.12.

<sup>25</sup> See NPRM, supra note 1, §III.13.

<sup>26</sup> See the U.S. Department of Justice Merger Guidelines, June 14, 1984, Section 2.21, reprinted in 4 Trade Reg. Rep. (CCH) para 13.103.

production of the product(s) would not occur. An important step in the process is to see whether consumers can find acceptable substitutes for the products or services included in the candidate market. If so, the candidate market is expanded to include these products. Once the relevant market is defined, the method goes on to consider whether the structure of this market is likely to be conducive to non-competitive pricing. The structure of the market, along with other factors (such as conditions of entry), is used as a proxy for determining whether the firms in the market might possess market power.<sup>27</sup>

For the purposes of this rulemaking, the aim would be to examine, empirically, whether the availability of other communications services (e.g., paging and wireline services) would prevent a hypothetical monopolist of wholesale cellular services (in a given CGSA) from raising price above the competitive level. The question of the demand substitution is crucial because if these alternatives would not prevent an anticompetitive price increase, then wholesale cellular service would be considered a relevant antitrust market. Any evidence the FCC has collected on this empirical issue would help greatly in determining whether or not providers of wholesale cellular service have market power. But because we find that this issue has not been clearly resolved, we adopt, in this comment, the conservative assumption that competition from other services is

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<sup>27</sup> See the U. S. Department of Justice Merger Guidelines, supra note 26.

too insubstantial to constrain facilities-based carriers from exercising market power.<sup>28</sup>

Under current FCC rules, no more than two facilities-based carriers are allowed in each CGSA.<sup>29</sup> Thus, these rules place an absolute barrier to entry into the provision of wholesale cellular service, and limit the number of providers of wholesale cellular service in each CGSA to two.<sup>30</sup> Under the assumption that wholesale cellular service constitutes a relevant antitrust market, the Herfindahl-Hirschman Index (HHI), which is used to measure the extent of market concentration, would be, at minimum, 5000,<sup>31</sup> well above the "highly concentrated" threshold contained

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<sup>28</sup> The NPRM and many of the comments have noted that the federal courts have ruled that a "cellular carrier may not be found to have market power in the service market." See Metro Mobile CTS v. New Vector Communications, 661 F. Supp. 1504, 1522-1525 (D. Ariz. 1987), aff'd 892 F. 2d. (9th Cir. 1989). However, this decision relates to the ability of the wireline cellular franchisee (in this case New Vector) to exercise market power vis a vis the non wireline franchisee (Metro Mobile) during the headstart period. In terms of the market definition exercise, the court found that New Vector, alone, did not possess market power. However, the court did not rule on the guidelines market definition issue of whether the two cellular franchisees together possess market power.

<sup>29</sup> See the discussion in note 14, supra.

<sup>30</sup> See Demsetz, "Barriers to Entry," 72 American Economic Review 47-58 (1982).

<sup>31</sup> The HHI is the sum of the squared market shares of the firms in a market. In a duopoly, the least concentrated market is a market where each of the two firms has a 50 percent market share. The HHI in this case equals  $50^2 + 50^2 = 5000$ .

in the Department of Justice Merger Guidelines.<sup>32</sup>

2. Competition between Resellers and Facilities-Based Carriers

In the NPRM, the FCC relies on cellular resellers to provide competition to the facilities-based cellular carriers.<sup>33</sup> It is unlikely that cellular resellers will provide effective competition at the wholesale level to the two facilities-based cellular carriers. Although the presence of resellers has been found to provide a competitive influence in other markets, such as the provision of wireline toll service within Local Access and Transport Areas (intraLATA), we do not expect that cellular resellers will have a similar effect.<sup>34</sup> Resellers operating in the intraLATA toll telephone service can purchase service from facilities-based long distance carriers. In essence, these long distance companies provide an alternative source of competition at the wholesale level to the local Bell Operating Company (BOC) through the resellers. Thus, it is the presence of an alternative source of competition to the BOCs at the wholesale

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<sup>32</sup> The Guidelines define markets where the HHI is above 1800 to be highly concentrated. See the U. S. Department of Justice Merger Guidelines, supra note 26, §3.11. "Highly concentrated" markets receive the most scrutiny under the Guidelines.

<sup>33</sup> See NPRM, supra note 1, §III.13.

<sup>34</sup> Mathios and Rogers, supra note 3, pp. 51-52 found that the existence of resellers in the intraLATA market lowered prices. They found that rates for intraLATA toll service were about 7.5 percent higher in states that restrict both facilities-based carriers and resellers from competing with the Bell Operating Companies (BOC) in providing this service. Restricting facilities-based carriers (but not resellers) from providing intraLATA toll service did not result in higher prices.

level, and not the presence of resellers, per se, that provides the observed competitive influence. Resellers in the intraLATA service facilitate competition by providing a retail outlet for an alternative source of wholesale competition.

In contrast, no similar source of wholesale competition to the facilities-based cellular licensees exists, so the cellular reseller cannot serve the same procompetitive function as the intraLATA reseller. Thus, while resellers can provide additional competition at the retail level, they cannot provide a check on the ability of the facilities-based carriers to exercise market power. Even with intense retail competition, the two facilities-based cellular carriers potentially can force the consumer to pay a supracompetitive price by setting wholesale service prices at supracompetitive levels. Furthermore, given the competitive state of the retail cellular market, it is unclear what marginal contribution resellers make in the retail market.<sup>35</sup> Resellers currently compete with a large number and variety of retail outlets in a competitive retail market, and it seems unlikely that their absence would result in a reduction in competition at the retail level.

Much of the opposition to the proposal to lift the FCC's prohibition of bundling has come from resellers. Reseller complaints, both in response to the NPRM and in court cases, claim that the facilities-based carriers are engaging in a

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<sup>35</sup> See the discussion surrounding note 15, supra.

predatory "price-cost squeeze" (i.e., increasing the uniform wholesale cellular price charged to retailers and reducing the retail price charged by the vertically-integrated retailers through commissions or other incentive payments).<sup>36</sup> As is the case in almost all alleged instances of predation, however, the observable implications of attempted predation (e.g., small margins, selective commissions or promotional payments to retailers) are difficult to differentiate from the observable implications of intense retail competition and from the use of an efficient distribution system.<sup>37</sup> And given that the ability of a wholesaler to choose how to distribute his products may have a significant impact on the type of services or the quality of the product provided, interference in these relationships should be

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<sup>36</sup> See NPRM, supra note 1, §II.3, and Metro Mobile v. New Vector, supra note 28.

<sup>37</sup> See, e.g., Miller and Pautler, "Predation: The Changing View in Economics and the Law," 18 Journal of Law & Economics 495-502 (1985). See also Cargill, Inc. and Excel Corp. v. Monfort of Colorado, Inc. 107 S. Ct. 484, 491-493 (1986). In general, if there are no quality control problems at the retail level, it is in the interest of even a monopoly wholesaler to have a competitive margin at the retail level in order to avoid a successive monopoly problem. See, e.g., Posner and Easterbrook, Antitrust Cases, Economic Notes and Other Materials, (2d. ed. 1981) pp. 875-76. Thus, one also would expect to observe small retail margins in an efficient and competitive retail market. If there are quality control problems at the retail level, the wholesaler may wish to limit competition at the retail level. See Klein and Leffler, "The Role of Market Forces in Assuring Contractual Performance," 89 Journal of Political Economy 615-641 (1981), and Klein and Murphy, "Vertical Restraints as Contract Enforcement Mechanisms," 31 Journal of Law & Economics 265-298 (1988). The quasi-rents resulting from limiting competition at the retail level act as a reward to those retailers who actually provide high quality service.

approached with caution.<sup>38</sup> As the Department of Justice noted in examining this market in 1986:<sup>39</sup>

"As is recognized in antitrust law and economic literature, allowing firms to select their own distribution networks is generally the most efficient government policy. Thus, in the absence of a showing of likely anticompetitive effect from a particular distribution system, regulatory constraints on a cellular carrier's decision as to which dealers should resell its service are unwarranted and would not serve the public interest in efficient distribution of cellular service."

The NPRM requests comment on how changing the bundling rule will affect resellers.<sup>40</sup> To the extent that elimination of the rule allows the cellular service companies to utilize their preferred distribution systems more intensively, and to the extent that resellers are not part of this preferred system, resellers may be adversely affected. However, the possibility that one type of retailer may be harmed, by itself, does not provide a basis for a rule that limits the use of a potentially efficient contract or retail distribution system. Given these considerations, and given that resellers are not likely to improve industry performance at either the wholesale or retail

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<sup>38</sup> See the discussion in note 37, supra.

<sup>39</sup> See Comments of the Department of Justice, In re Request of Cellular Telephone Company for Declaratory Ruling that Nonwireline Cellular Carriers Should Not Be Required to Provide Resale Service to Operating Wireline Cellular Carriers in the Same Market, Ref. No. 64400-SAW, June 3, 1986.

<sup>40</sup> In the NPRM, the FCC notes that "the justifications for the Commission's original adoption of anti-bundling policies did not focus on any impact of those policies on resellers. Rather, the unbundling requirements were intended to protect ratepayers and to promote competition in the CPE marketplace." See NPRM, supra note 1, § III.19.



level, there does not seem to be a compelling basis, based upon reseller complaints, to regulate vertical relationships between cellular carriers and their retailers.

## B. Economic Reasons for Bundling

In this Section, uses of bundling that have been identified in the economic literature are explored and considered in the context of the cellular service market. Part B.1 reviews transactions cost explanations for bundling. Part B.2 reviews the economic literature on promotional pricing and applies this to the bundling of CPE and cellular service. Part B.3 examines the "leverage" theory of bundling. Part B.4 examines price discrimination explanations of bundling. Finally, Part B.5 examines the use of bundling to evade rate-of-return regulation.

### 1. Bundling and Efficient Packaging

As noted in the NPRM, "packaged offerings are commonplace in a variety of industries in which customers can purchase a number of goods in a package at a lower price than the individual goods could be purchased separately." The courts have recognized that "there is nothing inherently anticompetitive about packaged sales," and under the federal antitrust laws, these packaged offerings are legal unless they constitute an illegal tie-in or otherwise represent an unlawful exercise of monopoly power.<sup>41</sup>

The economics literature has noted that bundling can be used to reduce transaction and information costs. In addition to

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<sup>41</sup> See Jefferson Parish Hospital District No. 2 v. Hyde, 466 U.S. 2, 25 (1984).